

# **PROCESS FOR ENHANCEMENT OF VOLTAGE ENDURANCE AND REDUCTION OF PARASITIC CAPACITANCE FOR A TRENCH POWER MOSFET**

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## **ABSTRACT OF THE DISCLOSURE**

10 A process for a trench power MOSFET comprises forming  
a trench on a semiconductor substrate and an oxide and nitride in  
the trench, etching the oxide and nitride to remain a part of them  
at the bottom of the trench, and subsequent procedure for the  
other structure of the trench power MOSFET. Due to the thick  
insulator formed at the bottom of the trench, the trench power  
15 MOSFET is improved by increased voltage endurance and reduced  
parasitic capacitance, and thereby the cell density is increased.